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ABSTRACT

The planning and construction of new school facilities involve sequential steps that lead to a completed building ready to provide a learning environment for students. The steps may include the development of philosophy and educational objectives, survey and inventory of existing facilities, preparation of an architectural design, site development, and actual building construction. Abstracts of 13 documents and articles in the ERIC system on these subjects compose this digest. (Author/MLF)

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EDUCATIONAL SPECIFICATIONS

By Philip Piele and Darrell Wright

The planning and construction of new school facilities involve sequential steps that lead to a completed building ready to provide a learning environment for students. The steps may include the development of philosophy and educational objectives, survey and inventory of existing facilities, preparation of an architectural design, site development, and actual building construction. In troubled economic times perhaps cost savings or energy conservation might highlight facilities planning, but it is imperative to hold the learning environment paramount in the planning process.

Who are the students? How are the students to learn? What are they to learn? Why is it necessary for learning to occur? Answers to these questions form the foundation of educational specifications giving philosophical, psychological, and pedagogical purpose to the mix of cement, wood, steel, brick, and mortar called facilities. The educational program, the teaching methods, the student population, and the space requirements all must be considered and defined in a set of educational specifications.

Educational specifications provide the architect with the philosophical and educational blueprint that gives rise to a conception of the facility. The architect must hear what others have to say about the learning process. Who the architect listens to depends largely on the planning process used by the school district administration. After listening, the architect must transform the educational specifications into a building that reflects, accommodates, and facilitates the educational ideas. The architect's role can be defined as creating a schematic idea, drawing plans, and supervising construction. The architect, though appropriately involved, does not develop educational specifications.

Who develops the educational specifications? The literature suggests that a variety of people are becoming involved. The administrators of a school district, the facilities planners, and the teachers are traditionally expected to be involved. An increasing emphasis on team planning can be seen, and the team may include parents, patrons, and students.

Some educators are emphasizing widespread community involvement as necessary to ensure that the school building will serve its purpose. Community participation helps to make sure that the building will be consistent with community expectations and needs, and it also assists in developing financial support for the building project. Many school districts are seeking to involve the community in school planning processes, including the development of educational specifications. The literature documents several educational specifications planning teams that include parents and students. Whereas, in the past, construction of a school building was delegated to the architect and the builder, today a building project generates widely delegated duties and responsibilities reflecting a broad range of interests.

The writing of educational specifications follows the trends in current educational thinking. Movement toward greater diversification in educational programs, including small-group learning, large-group instruction, and individualized learning, has been prominent in specifications. Equally noticeable has been the attention to flexible learning and space. There is evidence that schools will continue to provide maximum alternatives for innovative decision-making by every segment of the community.

Open spaces in schools are emerging in the recent educational specifications putting the spotlight on the learner. Continuous progress nongraded programs, team teaching, and unique programs for individual learners are requiring flexibility and openness in space utilization. Open schools provide conceptual and physical settings for optimum individualization in learning and attention to the uniqueness of each student in teaching. When the educational specifications indicate emphasis on the individual student, flexibility in use of teaching and material resources, and encouragement of innovation and change, the building design more often will contain open spaces, movable elements, and creative designs.

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Adams, Hugh D., and others. *Handbook on Architectural Services.* Montgomery: Alabama State Building Commission, 1968. 54 pages. ED 024 228.

This handbook, though dated, provides insight into the legal and technical aspects of working with architectural services. It reports policies and procedures established for agencies, architects, and engineers working on school construction projects in Alabama.

The publication covers all school construction, except mobile classroom units, and outlines the general requirements and procedures for submitting building plans. The authors stress accuracy in the communication of facts between owner and architect, emphasizing the involvement of the architect in school building planning.

Order from EDRS. MF $0.76 HC $3.32. Specify ED number.

California State Department of Education. *Twelve Small California Schools.* Sacramento: Bureau of School Planning, 1969. 91 pages. ED 072 550.

The introduction to this book of small-school plans states that the educational programs offered by California schools must be of sufficient scope and depth to meet the needs of every child. Also, the programs must be operated so that equal educational opportunities are provided for all the children of all the people.

To make these provisions, every school, regardless of the size of its pupil populations, must have a physical plant that is designed to provide facilities conducive to the effective and efficient operation of the educational program, sufficiently flexible to permit changes in the educational program, adequate in size, and adaptable for community use.

Although educational specifications are not stated, they are implicit in the program recommendations, which offer an interesting perspective for the planner.

Order from EDRS. MF $0.76 HC $4.43. Specify ED number.

Davis, Robert F. "The Development of Elementary School Educational Specifications and Preliminary Building Plans through the Use of Citizen and Staff Involvement." Ed.D.

Maxi II Practicum Report, Nova University, 1975. 291 pages. ED 101 439.

Davis describes the use of school staff and community people to develop educational specifications for elementary school buildings in Sacramento, California, where his practicum was conducted. He includes evaluations, interpretations, conclusions, and recommendations, which help to analyze the process. Extensive appendixes contain materials used in the process, memoranda, and a set of educational specifications for elementary schools.

Order from EDRS. MF $0.76 HC $14.59. Specify ED number.

Fredrickson, John H. "How to Make Old Buildings Meet New Needs." *American School and University*, 47, 1 (September 1974), pp. 37-41. EJ 102 609.

During times when buildings are being renovated more often than being replaced, educational specifications become important to determine the adequacy of the existing building. These specifications are listed as statement of philosophy, grade or class levels to be accommodated, enrollment capacity expectations, curricular programs and activities, specific utilization plan, instructional procedures, teaching space requirements, specialized instructional facilities, auxiliary areas or facilities, miscellaneous concerns, and closing or summary statement.

The educational specifications developed can be applied to the existing building to determine the changes needed.

This article continues by discussing additional necessary planning steps that lead to a completed renovation.

Haviland, David ... and Winslow, William F. "Designing for Educational Technology." *AIA Journal*, 54, 4 (October 1970). EJ 026 831.

Prepared to guide architects through resources on planning and designing for educational technology, this article discusses educational specifications by asking a series of questions. In relation to each learning situation, it is asked: How can the goal be best accomplished? How should the learners be grouped? What kinds of experiences should be included? What teaching techniques will be used? How much time is needed? What kinds of instructional resources are required? What personnel is anticipated?

The architect must be prepared to interpret the answers educators provide to these questions.

Metropolitan Toronto School Board. *Educational Specifications and User Requirements for Intermediate Schools. SEF Report E2.* Toronto, Ontario: Study of Educational Facilities, 1969. 247 pages. ED 030 295.

This report focuses on the early adolescent and the cultural matrix in which the student and school coexist. It provides working guidelines for academic specifications and user requirements for Toronto schools. Tables, technical data, and illustrations detail the various learning areas of the intermediate school.

Order copies from McGraw-Hill Company, 330 Progress Avenue, Scarborough, Ontario, Canada M1P 2Z5. $15.95.

Minnesota State Department of Administration. *Guide for Educational Planning of Public School Buildings and Sites in Minnesota. Revised.* St. Paul: Documents Section, 1971. 207 pages. ED 057 463.

This manual assists school planners engaged in developing a building program, including the tasks of planning, financing, and construction. It offers a complete guide for educators, board members, and architects in Minnesota and generalized information for their counterparts in other states.

Educational specifications are identified as pertinent information about the curriculum, enrollment, and special facilities. Elements to be included are educational philosophy, scope and sequence of the program, and local and state requirements, which are program statements. Other elements include facility implications, which describe course organization, scheduling, and teaching methodology; and plant requirements, which include lists of needed rooms, descriptions of activities, and approximate floor space needed.

Order copies from Documents Section, State Department of Administration, Room 140, Centennial Building, St. Paul, Minnesota 55155. $15.00.

Moir, D. A. *The Educational Specifications for Educational Facilities in the Britannia Community Services Centre.* Vancouver, British Columbia: Department of Planning and Evaluation, Vancouver Board of School Trustees, School District No. 39, 1972. 35 pages. ED 077 091.

Four major local building requirements provide the basis for stating educational specifications in Vancouver: (1) a 495-student school equaling 14 classroom spaces; (2) an elementary school gymnasium; (3) a joint school board-public library board library and resource center; and (4) space for administration, meals, health services, art, music, offices, and storage.

The educational specifications include statements of purpose, educational goals, and program concepts developed for the physical space requirements, providing an example or model. The paper presents a range of statements that logically follow from broad educational purposes to specified use of particular space.

The concepts include combined educational and community use within the framework of community education and joint occupancy.

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New Hampshire State Department of Education. *Guide for Planning the Construction of School Buildings: State of New Hampshire, 1971.* Concord: 1971. 104 pages. ED 097 762.

This planning guide recognizes that changing teaching methods require different space needs and relationships. Technological advancement, new insights into human learning and behavior, and awareness of social changes require new educational methodology and buildings that will facilitate and accommodate such changes.

Educational specifications are discussed as the philosophy and objectives for learning and teaching, the methods to be used to reach the goals, and the requirements for physical space, equipment, and furniture. Specifications, it is concluded, should result in better communication between the architect and the educator.

Order from EDRS. MF $0.76 HC $5.70. Specify ED number.

New Jersey State Department of Education. *Educational Specifications. Educational Facility Series: A Guide to Planning.* Trenton: Bureau of Facility Planning, 1973. 25 pages. ED 085 876.

Educational specifications are defined in this bulletin as statements that specify to an architect what is to be required of a proposed educational facility to implement a specific educational program in the most efficient and effective way. This definition is then expanded by delineating the elements of educational specifications that will assist local school planners in their facilities planning tasks.

Order copies from Director of Facility Planning Services, State Department of Education, 225 West State Street, Trenton, New Jersey 08625. $1.00.
Also available from EDRS. MF $0.76 HC $1.58. Specify ED number.

Ontario Department of Education. *Open Space General Learning Facilities for Kindergarten, Primary and Junior Students.* Toronto: School Planning and Building Research Section, 1971. 57 pages. ED 060 523.

Although this publication does not speak directly to the description or development of educational specifications, it is included here for facility planners who seek ideas for relating program to open building space and the learning environment. The reader can infer an educational philosophy and instructional program content necessary for educational specifications from the space and design concepts portrayed in this publication.

Order copies from Ontario Government Bookstore, 880 Bay Street, Toronto, Ontario M7A 1N8, Canada. $2.00 prepaid.
Order MF from EDRS, $0.76. Specify ED number.

Ontario Department of Education. *Schools for Intermediate Students.* Toronto: School Planning and Building Research Section, 1971. 40 pages. ED 055 347.

The special characteristics and needs of intermediate students have particular implications for the design of building space and learning environment. Youth, aged 12 to 15, are characterized by changing feelings and exploring in the learning fields; therefore, organizational flexibility, personalized instruction, and a sensitive environment should be primary considerations for building planners.

This publication assists facility planners in understanding the unique specifications required for early adolescent learners.

Order from Ontario Government Bookstore, 880 Bay Street, Toronto, Ontario M7A 1N8, Canada. $2.00 prepaid.
Order MF from EDRS, $0.76. Specify ED number.

Thrasher, James M. *Effective Planning for Better School Buildings.* Midland, Michigan: Pendell Publishing Co., 1973. 35 pages. ED 082 298.

The planning process, including the statement of educational specifications, is accomplished by a variety of people in various roles. The teacher has an important role in the planning process when developing educational specifications because of unique knowledge of students and learning activities. The roles fit together into a planning team of citizens, students, teachers, architects, and administrators. Educational specifications result from the efforts of the team.

Order copies from Pendell Publishing Company, P.O. Box 1666, Midland, Michigan 48640. $1.50.

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